

The dating of certain of d'Orbigny's brachiopod and bivalve nominal taxa

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The most widely cited sources concerning authorship of higher taxa among brachiopods are Dall (1877), Schuchert & LeVene (1929), Muir-Wood (1955) and Williams et al. (1965). Resulting from our work on the revision of the *Treatise on Invertebrate Paleontology* (1965) we have found that changes in some current assumptions are necessary.

A number of brachiopod families and genera were erected in several publications by d'Orbigny between 1847 and 1852, and the date of issue of some of these papers has often been disputed. Thus Sherborn (1899), using the independent evidence of contemporaneous literature surveys in the *Neues Jahrbuch für Mineralogie, Geognosie, Geologie und Petrefakten-Kunde* (co-edited by H.G. Bronn), pointed out that d'Orbigny's famous *Paléontologie Française. Terrains Crétacés*, vol. 4 (our reference '1847d'), although displaying the date 1847 on the title page, was in fact issued at various times between 1848 and 1851. Presumably it is for this reason that authorship and date of the family RHYNCHONELLIDAE has often been attributed to Gray (1848), with the notable recent exception of Laurin (1984, pp. 15–16, 360). Laurin postulated d'Orbigny (1847) as author of this name, though he admitted to uncertainty about details of its first publication and assumed that Gray and d'Orbigny would have been ignorant of each other's papers (see also Zittel, 1880, pp. 661, 689).

We decided to look into the matter further as there are other papers by d'Orbigny (1847a, b, 'c') which are relevant to this issue and have similar titles. D'Orbigny's initial contribution was read to the Paris Academy of Sciences at the sessions of 2 and 16 August 1847 and appeared in two different parts of the *Comptes Rendus* (internally dated as Second Semester 1847; see pp. 177, 265, footnotes). These are our reference d'Orbigny (1847a). Fuller versions were subsequently published in the *Annales des Sciences Naturelles*, the first part in vol. 8 (internally dated as October 1847) and the second part in vol. 13 (internally dated as June 1850). The first part of this expanded version is our reference d'Orbigny (1847b) and the second is our d'Orbigny ('1847c').

When external evidence from the *Neues Jahrbuch* is taken into account it becomes clear that only d'Orbigny (1847a and 1847b) could have been published, in that order, in 1847 and fairly late in the year. Neither of them was noted within the *Neues Jahrbuch* for 1847, but both parts of d'Orbigny (1847a) were reviewed together and in essence translated by Bronn (1848, pp. 244–248) quite early in 1848. Bronn introduced some emendations, unjustified by present standards, to d'Orbigny's original spellings. That same issue of the *Neues Jahrbuch* included a critical report by Roemer on James Hall's *Palaeontology of New York*, vol. 1 (1847), and letters to the

editor dating from 20 October 1847 to 10 January 1848. Later (*Neues Jahrbuch*, 1848, p. 478) a report appeared on vol. 8 (for July-October 1847) of the *Annales des Sciences Naturelles* which specifically referred to d'Orbigny's paper and earlier review. This later issue of the *Neues Jahrbuch* contains editorial correspondence dating from 21 April to 18 June 1848.

Gray's paper (1848) was not printed until the last issue (December) of *Annals and Magazine of Natural History* for 1848, and records that d'Orbigny (1847b) was already published. Hence, d'Orbigny's (1847a, 1847b) nomenclatural acts have priority over Gray (1848), and Bronn (1848, pp. 244-248) predates Gray within 1848. Other nomenclatural contributions by d'Orbigny himself (1848, p. 12; 1850, p. 321; 1851, p. 342; 1852, p. 85) now become irrelevant inasmuch as they postdate Gray. Consequently the family-group names based on *Rhynchonella* (RHYNCHONELLACEA, RHYNCHONELLIDAE and RHYNCHONELLINAE) should all be attributed to d'Orbigny (1847a, p. 268). The family name was used subsequently by Gray (1848), Bronn (1848, p. 246, as RHYNCHONELLIDAE) and Carpenter in Davidson (1853, p. 35, as RHYNCHONELLIDAE). The superfamily was first proposed by Schuchert (1896, p. 323) and the subfamily by Gill (1871, p. 25).

During the course of our inquiry into the validity of d'Orbigny's taxa we noticed that the authorship of other family group names also appears to be at variance with currently accepted citations in the *Treatise on Invertebrate Paleontology*, parts H and N (Williams et al., 1965; Cox et al., 1969), and also in Sarycheva et al. (1960, pp. 186, 250, 282, 304) and Ehberzin et al. (1960, pp. 158, 160). The necessary corrections, as we see them, are noted below for the use of colleagues working on the relevant groups who might find such information useful. Items (a) to (d) concern brachiopods and the remaining observations relate to molluscs. No criticism of past research on these taxa is implied here.

(a) On p. H311, the family ORTHIDAE is attributed to Woodward (1852, p. 229) but it had already been made available (as ORTHISIDAE) by d'Orbigny (1847a, p. 267). Woodward only corrected the spelling.

(b) On p. H649, the family UNCITIDAE is attributed to Waagen (1883, pp. 487, 494) as a subfamily, later raised to family rank by Schuchert (Schuchert & LeVene, 1929, p. 22). In fact it had been made available by d'Orbigny (1847a, p. 268).

(c) On p. H849, the subfamily MAGADINAE is attributed to Davidson (1886, p. 4, as MAGASINAE), with stem correction by Elliot & Hatai therein. However, earlier uses are known: as MAGASINAE by H. & A. Adams ([1858], p. 576; see also Dall, 1877, pp. 45, 77) and most importantly by d'Orbigny (1847a, p. 268, as MAGASIDAE). D'Orbigny's name threatens, on grounds of priority, the widespread usage of the superfamily TEREBRATELLACEA and family TEREBRATELLIDAE of King (1850, p. 245), who was clearly aware of d'Orbigny's proposal, even though accepting it with a modified scope (cf. pp. 142, 246). For the sake of stability this may require Commission intervention.

(d) It should be noted that d'Orbigny (1847a) also introduced a number of brachiopod generic names: *Orthisina* (p. 267), *Hemithiris* (p. 268), *Spiriferina* (p. 268), *Spirigera* (p. 268), *Terebratulina* (p. 268), *Terebratella* (p. 269), *Terebrirostra* (p. 269), *Fissirostra* (p. 269), *Megathiris* (p. 269), *Orbicella* (p. 269), *Orbiculoidea* (p. 269). Save for a few minor exceptions most have been adopted as available from that date and those pages by Williams et al. (1965). The last name was recorded by the Commission in Opinion 722 (April 1965).

In addition, two families of the rudist order Hippuritoida Newell, 1965, now classed with the Bivalvia but considered by d'Orbigny (1847a) to be an order of the Brachiopoda, were recognised by him. These were the CAPRINIDAE (p. 269), based on the genus *Caprina* C. d'Orbigny, 1822 and also including *Hippurites*, *Caprinula* and *Caprinella*, and the RADIOLITIDAE (p. 269, as RADIOLIDAE; correctly spelled by Gray, 1848, p. 439), based on *Radiolites* and including *Caprotina* A. d'Orbigny, 1842.

The family CAPRINIDAE was first mentioned by d'Orbigny (1842) in the vernacular form Caprinidées, based on *Caprina* and additionally including *Caprotina* and *Icthyosarcolites*. The majority of monographic works mention neither author nor date for this family so it is not available from 1842 under Article 11f(iii) of the Code. We recommend that the name CAPRINIDAE d'Orbigny be recognised as available from its first latinized usage (1847a, p. 269).

The family name HIPPURITIDAE Gray, 1848 (p. 440) was placed on the Official List in Opinion 613 (November 1961); in 1842 d'Orbigny had used the vernacular Hippuridées. It follows that in the superfamily recognised by Cox et al. (1969, p. N749) as the HIPPURITACEA Gray, 1848 there are two older family names of d'Orbigny (1847a): CAPRINIDAE and RADIOLITIDAE.

We invite comments from specialists interested in either Brachiopoda or Mollusca concerning the best actions to undertake in order to stabilize nomenclature.

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